



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,082	08/09/2005	Jean-Pierre Moy	62843(4590-358)	2893

33308 7590 02/21/2006

LOWE HAUPTMAN GILMAN & BERNER, LLP
1700 DIAGNOSTIC ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

PEACE, RHONDA S

ART UNIT	PAPER NUMBER
----------	--------------

2874

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/518,082

Applicant(s)

MOY ET AL.

Examiner

Rhonda S. Peace

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 and 10-16 is/are allowed.
- 6) ☒ Claim(s) 7, 8, 9 and 17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/16/04, 8/9/05</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file of this National Stage Application from the International Bureau (PCT Rule 17.2(a)).

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 12/16/2004 and 8/9/2005 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

Claims 6, and 13-16 are objected to because of the following informalities: these claims specify that the lenses focus radiation "onto a Gaussian mode diameter of between 1 and 50 ~tm." From the applicant's disclosure, specifically page 4 in the specification, the Examiner has determined that the applicant is intending a diameter of 1 to 50 microns. However, "~tm" is not a recognized abbreviation for the micron, and the Examiner kindly requests the applicant use a recognized abbreviation, such as "µm." Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7, 8, 9 and 17 are rejected under 35 U.S.C. 102(b) as being unpatentable over Pan (US 5706371).

Pertaining to claims 7, 8, 9, and 17, Pan discloses an optical isolator array device wherein an optical component **13** between two optical fibers **25** furnished at their end with lenses **21** (column 2 lines 45-55, hereafter indicated as 2:45-55, 2:66-67, 3: 46-52, Figs 1 and 3). A support **10**, on which is fixed an array of capillary tubes **12** by the use

Art Unit: 2874

of epoxy, has a blind cut **14** (a cut which does not penetrate the entire depth of the support) so as to separate the capillary tubes **12**, wherein the cut **14** is perpendicular to the longitudinal axis of the fibers **25** (within grooves **11**) and the optical component **13** is fixed with epoxy therein so as to be flush against one face of the cut **14** so that it is also perpendicular to the fiber **25** axis (2:64-67, 3:1, Fig 1). It is also noteworthy that Pan discloses the cut **14** may be non-perpendicular to the longitudinal axis of the fibers **25**, due to the desire to closely fit the cut dimensions with the dimensions of optical component **13** (3:19-27). Therefore, one of ordinary skill in the art would have found it obvious to fashion the cut so that the cut is perpendicular to the longitudinal axis of the fibers, as Pan has disclosed this option as one of two manners in which to fashion the cut. In addition, it is well known in the art to fashion a cut that is perpendicular to the longitudinal axis of an optical fiber. Another instance where such a cut is disclosed in prior art would be Cullen et al (US 5325456), and is mentioned herein only as an example of a perpendicular cut. Furthermore, as Pan discloses both perpendicular and non-perpendicular cuts (with reference to the optical fiber longitudinal axis), it would have been obvious to one of ordinary skill in the art to form a cut of any geometry, so that it closely fits the optical component disposed therebetween the fibers, including making the first cut perpendicular to the longitudinal fiber axis and the second cut at an acute angle with the first cut, as this orientation would fit, for example, a right-triangular shaped optical component.

Allowable Subject Matter

Claims 1-6, and 10-16 are allowed.

The following is an examiner's statement of reasons for allowance: While the prior art discloses structures, such as Pan discussed above, which have similar structural features to the present invention, this applicable art does not disclose, nor does it reasonably suggest a *method* for creating such a device wherein the support is *drilled* so as to fix a *capillary tube* therein, the tube is fixed in the drilling of the support, a *blind* cut is made in the support in such a manner as to separate the capillary tubes, and wherein the first plane face of the cut is *perpendicular* to the longitudinal axis of the capillary tube. Further, an optical component is then positioned *on the first plane face* of the cut, and an optical fiber is positioned in each of the capillary tubes.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cullen et al (US 5325456) discloses an optical isolator in an optical fiber feed through. Winzer (US 4285571) discloses a branching device. Hasui et al (US 6535655) discloses a fiber optic polarizer and method of making the same. Sato (US 6118915) discloses a hybrid assembly of bulk optical elements and a method of making the same. Suzuki et al (US 6665464) discloses an optical function module having a removable optical functioning unit. Hehlen et al (US 6580842) discloses an integrated optical circulator array. Sato (US 6485191) discloses a fiber stud type device

Art Unit: 2874

and an optical module using the same. Li et al (US 6272264) discloses a multiple channel optical filter. Hasui et al (US 6920255) discloses a polarizer-equipped optical fiber ferrule, connector, and connector adapter. Zheng (US 6282339) discloses a wavelength division multiplexed coupler with flexible and precise optical path adjustment. Hanashima et al (US 2004/0067023) discloses a spot size transformer, and method of producing the same.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda S. Peace whose telephone number is (571) 272-8580. The examiner can normally be reached on M-F (8-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272- 2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rhonda S. Peace

Application/Control Number: 10/518,082

Page 7

Art Unit: 2874

Examiner

Art Unit 2874

Michelle R. Connelly-Cushwa

MICHELLE CONNELLY-CUSHWA

PRIMARY EXAMINER

2/16/06